


Amendments to the claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method of efficiently using bandwidth for contention based access and ranging in a time-synchronized communication system, wherein the communication system comprises at least one base station and at least two subscriber units, the method comprising the steps of:

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- (a) waiting for a contiguous new access opportunity time window;
 - (b) scanning for an access burst message from a subscriber unit during the new access opportunity time window;
 - (c) acquiring an ~~the~~ access burst message from a corresponding subscriber unit during the new access opportunity time window;
 - (d) sending a Tx delay time data value to the corresponding subscriber unit for communication time synchronization; and
 - (e) returning to step (a) if the new access opportunity has expired, else returning to step (b);

such that a plurality of access burst messages are acquired from corresponding subscriber units during at least one contiguous new access opportunity time window.

2. (Currently Amended) A method of efficiently using bandwidth for contention based access and ranging in a time-synchronized communication system, wherein the communication system comprises at least one base station and at least two subscriber units, the method comprising the steps of:

- (a) waiting for a contiguous new access opportunity time window;
- (b) scanning for an access burst message from a subscriber unit during the new access opportunity time window;
- (c) acquiring an ~~the~~ access burst message from an associated subscriber unit during the new access opportunity time window;
- (d) storing a Tx delay time data value for the associated subscriber unit;

- (e) determining whether the new access opportunity time window has expired; and
- (f) sending the Tx delay time data value to the associated subscriber unit for communication time synchronization and returning to step (a) if the new access opportunity time window has expired, else returning to step (b), such that a plurality of access burst messages are acquired from associated subscriber units during at least one contiguous new access opportunity time window.

3. (Original) The method of efficiently using bandwidth for contention based access and ranging in a communication system of claim 2, wherein the access burst message from the subscriber unit comprises a packet further comprising a send time of the subscriber unit.

4. (Original) The method of efficiently using bandwidth for contention based access and ranging in a communication system of claim 2, wherein the access burst message acquired from the subscriber unit comprises a packet including an identification data associated with the subscriber unit.

5. (Original) The method of efficiently using bandwidth for contention based access and ranging in a communication system of claim 2, wherein the communication system is a broadband wireless communication system.

6. (Original) The method of efficiently using bandwidth for contention based access and ranging in a communication system of claim 2, wherein the communication system is a cable modem communication system.

7. (Original) The method of efficiently using bandwidth for contention based access and ranging in a communication system of claim 2, wherein the communication system is a satellite communication system.

8. (Original) The method of efficiently using bandwidth for contention based access and ranging in a communication system of claim 2, wherein the communication system is a cellular telephone communication system.

9. (Currently Amended) An apparatus for contention based access and ranging in a time-synchronized communication system, wherein the communication system comprises at least one base station and at least two subscriber units, comprising:

- (a) means for detecting an occurrence of a contiguous new access opportunity time window;
- (b) means for scanning for ~~an access burst messages from a subscriber unit~~ corresponding subscriber units during the new access opportunity time window;
- (c) means for acquiring a plurality of the access burst messages from a subscriber unit corresponding subscriber units during the new access opportunity time window; and
- (d) means for sending Tx delay time data values to the corresponding subscriber units ~~a Tx delay time data value to the subscriber unit~~ for communication time synchronization.

10. (Original) The apparatus as set forth in Claim 9, wherein the access burst message obtained from the subscriber unit comprises a packet including a send time associated with the subscriber unit.

11. (Original) The apparatus as set forth in Claim 9, wherein the access burst message obtained from the subscriber unit comprises a packet including identification data associated with the subscriber unit.

12. (Original) The apparatus as set forth in Claim 9, wherein the communication system is a broadband wireless communication system.

13. (Original) The apparatus as set forth in Claim 9, wherein the communication system is a cable modem communication system.

14. (Original) The apparatus as set forth in Claim 9, wherein the communication system is a satellite communication system.

15. (Original) The apparatus as set forth in Claim 9, wherein the communication system is a cellular phone communication system.

16. (New) Apparatus for contention based access and ranging in a time-synchronized communication system, wherein the communication system comprises at least one base station and at least two subscriber units, comprising:

- (a) a scan window detection module configured to detect an occurrence of a contiguous new access opportunity time window;

- (b) a received signal scanning module configured to scan for a plurality of access burst messages from corresponding subscriber units during the new access opportunity time window;
- (c) a received signal analysis module configured to acquire a plurality of access burst messages from corresponding subscriber units during the new access opportunity time window;
and
- (d) a transmission module configured to send Tx delay time data values to the corresponding subscriber units for communication time synchronization.

17. (New) The apparatus as set forth in Claim 16, wherein the access burst message obtained from the subscriber unit comprises a packet including a send time associated with the subscriber unit.

18. (New) The apparatus as set forth in Claim 16, wherein the access burst message obtained from the subscriber unit comprises a packet including identification data associated with the subscriber unit.

19. (New) The apparatus as set forth in Claim 16, wherein the communication system is a broadband wireless communication system.

20. (New) The apparatus as set forth in Claim 16, further comprising a contention module configured to resolve collisions between access bursts.